2

Language Documentation & Conservation Special Publication No. 20
Collaborative Approaches to the Challenge of Language Documentation and Conservation: Selected papers from the 2018 Symposium on American Indian Languages (SAIL)
ed. by Wilson de Lima Silva and Katherine Riestenberg, p. 6-19
http://nflrc.hawaii.edu/ldc
http://hdl.handle.net/10125/24929

Integrating collaboration into the classroom: Connecting community service learning to language documentation training

Kathryn Carreau, Melissa Dane, Kat Klassen, Joanne Mitchell,

Christopher Cox

School of Linguistics and Language Studies
Carleton University

As training in language documentation becomes part of the regular course offerings at many universities, there is a growing need to ensure that classroom discussions of documentary linguistic theory and best practices are balanced with the practical application of these skills and concepts. In this article, we consider Community Service Learning (CSL) in partnership with community-based organizations as one means of grounding language documentation training in realistic and collaborative practice. As a case study, we discuss a recent CSL project undertaken as a collaboration between the Yukon Native Language Centre and graduate students in an introductory course on language documentation at Carleton University. This collaboration focused on annotating legacy language lessons for several Indigenous languages of the Yukon Territory, Canada, using software tools to create a text-searchable, multimedia database for pedagogical applications. Drawing on the reflections of both community- and university-based collaborators, we discuss the design of this project, some of the challenges that needed to be addressed as the project progressed, and offer several recommendations for future initiatives to integrate CSL into language documentation training.

1. INTRODUCTION. The fields of language documentation and revitalization have recently seen an increase in the availability of training opportunities indicating both a growing interest in work in these areas and a need to bridge gaps present between theory and practice (Austin 2016; Bischoff & Jany 2018; Fitzgerald & Linn 2013).[1] As recent studies have noted, these training opportunities are diverse, taking a variety of forms and aiming to serve a range of different audiences and purposes: whether responding to the specific needs of individual Indigenous and minority language communities in

[1] We gratefully acknowledge the many Yukon First Nations and Alaska Native Elders, teachers, language workers, and their collaborators at the Yukon Native Language Centre whose efforts produced the language lessons that are the focus of the Community Service Learning project discussed here. In particular, credit is due to Josephine Acklack, Lorraine Allen, Kathy Birckel, Mary Blair, Elizabeth Blair, Catherine Germaine, Isaac Juneby, Virginia Kemble, Mary Jane Kunnizzi, Annie Lord, Ann Mercier, Jane Montgomery, Emma Sam, Terry Sawyer, Marlene Smith, Grady Sterriah, Rachel Tom Tom, Jocelyn Wolftail, and Lucy Wren, whose voices and contributions are represented in these lessons. Financial support for this project was provided by a Carleton University Teaching Development Grant (2018–2019).
 ISBN: 978-0-9973295-8-2

implementing local language programs (e.g., DRIL; Florey 2018) or introducing participants to common practices in language documentation and revitalization that may be relevant both to language community members and others with an interest in this area (e.g. Genetti & Siemens 2013).

Common to many of these training situations is an emphasis on collaboration as a core practice, with relationships of mutual respect, trust, and support enabling diverse partners to contribute and develop their skills and knowledge through collective engagement in language work. As central as this aspect of language documentation and revitalization may be to many language initiatives, collaborative practices can be challenging to integrate into training opportunities. Relatively short-term schedules, even in the context of intensive training, may limit opportunities for participants to begin to establish these kinds of relationships; while some forms of training focused on technical aspects of documentary linguistic practice (e.g., digital recording and annotation methods) may tacitly assume the existence of relationships between partners and a general alignment of interests that would allow such methods to be applied in practice.[2] In this context, this article explores the potential for Community Service Learning (CSL) as a means of bringing together collaboration and documentary linguistic training, taking as an example a recent partnership between graduate students and an instructor (Cox) at Carleton University in Ottawa, Ontario, Canada and the Yukon Native Language Centre (YNLC) in Whitehorse, Yukon, Canada.

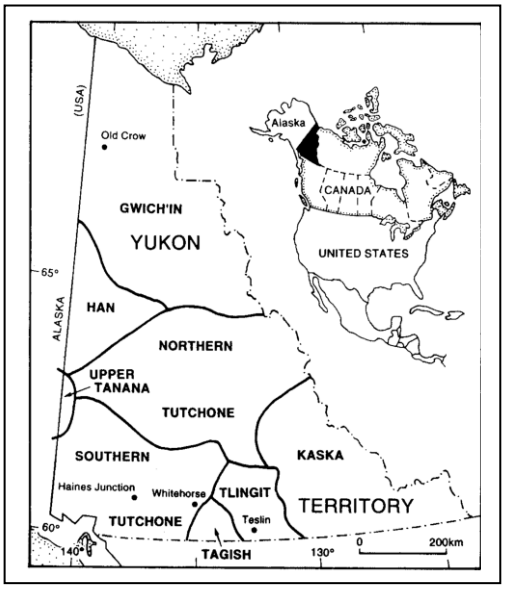

FIGURE 1. Yukon Indigenous languages in the Yukon Territory (reproduced from Wein & Freeman 1995:162).

As a community organization, YNLC provides linguistic training and educational services to the fourteen Yukon First Nations, their citizens, and the general public. In addition, as part of its mandate as a department of the Council of Yukon First Nations, YNLC contributes to the development of learning materials and other resources in the eight recognized Indigenous languages spoken in the Yukon Territory, whose geographical distribution is summarized in Figure 1. These resources and programs have been focused most recently on the revitalization of Yukon Indigenous languages, with the aim of supporting the younger language learners' and emerging speakers' language proficiency development (Yukon Native Language Centre 2018). As such, these resources have been made available to the general public for over 20 years and are frequently used in Yukon public schools.

While YNLC has contributed substantially since its establishment as a language center in 1985 to the development of learning resources for Indigenous languages in the Yukon and neighboring areas of Alaska, British Columbia, and the Northwest Territories, this increasing emphasis on language revitalization and the needs of emerging speakers has brought renewed attention to the need to expand the accessibility of exist-

[2] See Benedicto (2018) for further discussion of (mis)alignment between academic and community interests in language documentation.

ing language materials for a wide range of audiences. This situation presented an opportunity for members of YNLC and Carleton University to consider how they might be able to work together to improve the accessibility of one such set of 'legacy' language learning materials for Yukon Indigenous languages, which were already familiar to Yukon public schools and communities, while also providing training opportunities for the staff members and students involved. In the following sections, we discuss how this collaboration between a community language organization, a university instructor, and a group of graduate students came to be, and how its framing in terms of CSL assisted in integrating collaborative documentary linguistic activities as core components of both community-based and university-based training. As the following sections highlight, such partnerships—although not without challenges—can help foster positive relationships between linguistic communities, students, and others, yielding potentially impactful results.

2. PARTNERSHIP. The project detailed herein is conceptualized in terms of Community Service Learning (CSL): "an educational approach that integrates service in the community with intentional learning activities. (...) [M]embers of both educational institutions and community organizations work together toward outcomes that are mutually beneficial." (Canadian Alliance for Community Service-Learning 2018).[3] For this project, CSL was seen as a means of aligning existing opportunities for training in language documentation with the priorities of ongoing community language education and revitalization programs, in this case involving Indigenous languages in the Yukon. In part, this project came about as the result of an existing relationship between the Director of YNLC and Christopher Cox, an assistant professor at Carleton University who had worked in the Yukon between 2013–2016. This liaison facilitated the partnership between Carleton University students and the larger network of staff members at YNLC with the following broad roles:

> *Yukon Native Language Centre:* Staff members at YNLC and the university instructor worked together to identify existing language resources that served as important learning resources in many Yukon-based language programs, and which would be appropriate to be developed into more accessible forms in a collaborative project involving Carleton University students, with whom YNLC staff members had previously expressed interest in collaborating. These discussions highlighted the need for technical training not only for Carleton students, but also for YNLC staff who would be working with these same materials and technologies. An overview of the collection of language materials and techniques that were ultimately selected for this project is provided in the following section. As well, it was recommended that this work focus not only on documentary linguistic training, but also on providing participants with an opportunity to learn more about the Yukon First Nations languages and communities represented in these resources with the assistance of YNLC.
>
> *Carleton University:* Students participating in this project were enrolled in an introductory seminar in language documentation at the graduate level. The primary objective of this course was to examine current theoretical and ethical issues that

[3] See also Fitzgerald 2009, 2010, 2018 for discussion of service-learning and its application in linguistics and language documentation and revitalization.

arise in the context of language documentation, while providing practical experience with current digital methods in documentary linguistics. These graduate students in applied linguistics and discourse studies generally had limited or no prior training in either descriptive linguistics or language documentation, and none had previous experience with Indigenous languages in northwestern Canada. This highlighted a need for training in common documentary linguistic methods that was shared with staff at YNLC, as well as for an introduction to Indigenous languages in the Yukon and Yukon First Nations. This training is discussed further in §4.

3. METHODS AND MATERIALS. The CSL project described here concentrated on a series of legacy language learning materials that were developed by Yukon First Nations Elders, language teachers, and YNLC staff members between 1994–1995. During this time, sets of language lessons were created for multiple dialects of eight Yukon First Nation languages, with each such set of lessons including textbooks with vocabulary-focused lessons as well one or more corresponding audio cassettes with recordings of first-language speakers' pronunciations of target vocabulary. The audio recordings for each lesson followed a common format: a speaker would read a word or phrase in English, followed by two repetitions of the equivalent in the target Indigenous language variety.

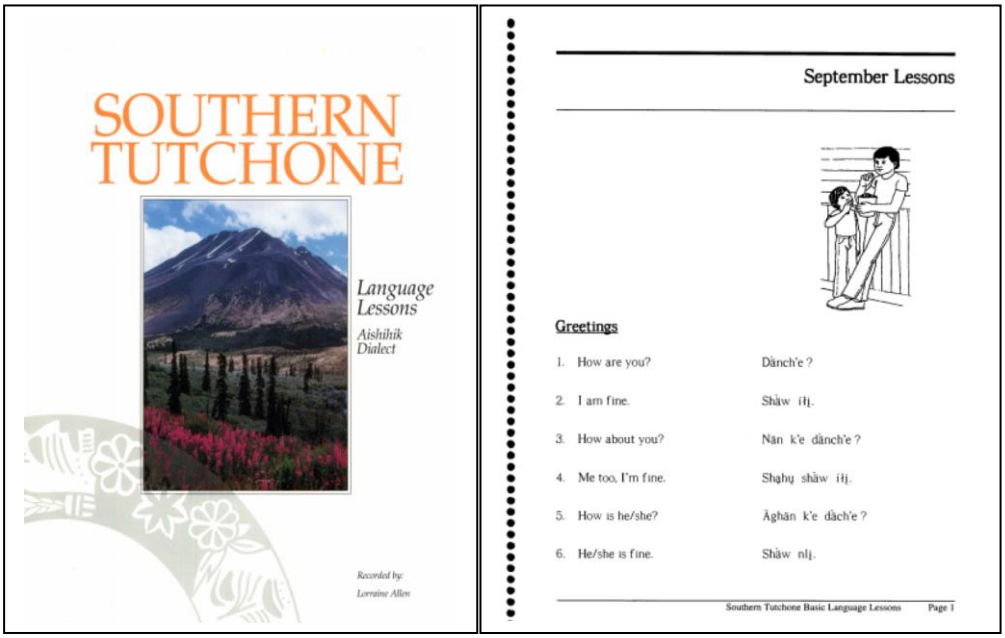

FIGURE 2. Example language lessons for the Aishihik dialect of Southern Tutchone (ISO 639-3: tce) (Allen & YNLC1994).

The corresponding printed textbooks had a similar structure, with lessons divided into monthly units that introduced vocabulary through conversational exchanges that typically centered on activities associated with that time of year (e.g., fishing, moose hunting, or fire-making), as seen in Figure 2.

Since their publication, these language lessons have served as important resources for language education programs throughout the Yukon, especially for Yukon First Nations languages with relatively few fluent, first-language speakers. However, the analog format of these materials presented barriers to their reuse as general-purpose

resources in current language programs. In addition, while organized coherently according to a seasonal calendar that limited the range of topics that might be anticipated to be covered in any given unit, the printed textbooks did not include a table of contents or index of the vocabulary they contained. This made it challenging at times to find information that could potentially be organized under more than one season (e.g., weather terminology, which was typically distributed across multiple lessons in several units). Similarly, while the original audio cassettes could be consulted to provide examples of fluent speakers' pronunciations of Indigenous language text, both the analog format of the cassette tapes themselves and the lack of an index providing the starting times of particular sections made it difficult for these resources to be navigated and their contents drawn on fully in ongoing language programs.

With the assistance of the Yukon Department of Education, the original printed booklets and the analog audio cassettes for each set of lessons were digitized by Cox, producing a collection of archival PDF (PDF/A) documents and uncompressed WAV audio files, as well as corresponding presentation copies in lower-resolution PDF and MP3 formats. The availability of digital facsimiles of these materials represented a first step towards improving their overall accessibility. The provision of digital audio reduced the need for functioning cassette decks to be present in language classrooms and other spaces to be able to consult recordings of fluent speakers, while applying basic optical character recognition (OCR) to the scanned textbooks allowed for limited searches of their English-language contents. At the same time, users of these materials were still restricted in their ability to search for information in these materials by Indigenous language text (for which the available OCR methods proved largely unreliable), or to call up the corresponding pronunciations in the digitized audio recordings. This limited the degree to which Indigenous language text and audio could be consulted without relying on the provided English equivalents.

4. COMMUNITY SERVICE LEARNING PROJECT FRAMEWORK. The CSL project was proposed as one way of making these language materials more accessible for language teachers, learners, and those involved in supporting language education and revitalization programs. Graduate students from Carleton University would be provided with digital files of the language recordings for segmentation and analysis. The language recordings would be parsed into individual segments, which were defined as pause-delimited utterances generally corresponding with boundaries provided in the original, printed lesson booklets that could be compiled into a searchable corpus.

Training in documentary linguistic methods

Annotation of the audio recordings was conducted in ELAN (Wittenburg et al. 2006; Sloetjes 2014).[4] As the current *de facto* standard for audiovisual annotation in language documentation, adopting ELAN for this project provided both valuable practical experience for graduate students and YNLC staff members in working with multilingual documentary materials, as well as non-proprietary representations of the contents of these recordings that fit with the long-term mandate of YNLC to facilitate access to resources such as these for language revitalization, education, and study. As well, the ability of ELAN to represent complex annotation scenarios (e.g., recordings containing multiple speakers, languages, and different kinds of information) through user-defined

[4] ELAN is an open-source desktop application associating time-aligned textual information with audiovisual materials; see https://tla.mpi.nl/tools/tla-tools/elan/.

sets of hierarchically organized tiers afforded the flexibility needed in this project to capture much of the primary linguistic information present in these materials.

As part of the planning for this CSL project, YNLC staff and the instructor decided that the initial annotation of these materials would be conducted by graduate students in applied linguistics and discourse studies at Carleton University as part of a four-month seminar on language documentation, with staff members at YNLC providing guidance as to how these materials should be treated. Since most participants in this project had not worked with ELAN before, the seminar's instructor provided training in the software to both the Carleton graduate students (through several hours of classroom training, as well as through direct supervision throughout the semester) and to YNLC staff members (through in-person training sessions offered by the instructor during a visit to YNLC that semester, as well as ongoing, long-distance support). Both groups participated in essentially the same number of contact hours of technical training, discussing the same annotation-related topics and working through the same practice exercises. This training focused on familiarizing both groups with three main features of ELAN: the segmentation of audio and video materials, the assignment of annotations to tiers and tier types, and the process of entering and working with textual annotations using the software.

Workflow

Each student contributor was provided with copies of two or three of the digitized language lesson recordings (totaling approximately 90 minutes of audio), as well as with the corresponding scans of the textbooks for these lessons. The file names of the audio recordings indicated the Yukon First Nation language being spoken, as well as the names of the speakers in each recording. Following their in-class training, students were expected to set up an ELAN transcript for each assigned recording, using common tier naming conventions and tier type definitions to facilitate consistency across the transcripts produced. Following the same conventions when defining tiers not only facilitated this initial training (and the later stages of peer review described below), but also allowed for sophisticated searches to be conducted across all of these materials as a unified corpus in the future (e.g., "retrieve all annotations that mention the word 'blue' in their English translations"). An overview of this structure is given in Table 1 below.[5]

Tier name	*Parent tier*	*Tier type and stereotype*	*Description*
SPK-Text	-	text (-)	Transcribed speech
SPK-Translation	*SPK*-Text	translation (SA)	English free translations
SPK-Notes	*SPK*-Text	note (SA)	Notes on this annotation

[5] ELAN requires that every user-defined tier type be assigned one of a fixed number of "stereotypes," which include the default and Symbolic Association stereotypes mentioned in this table. These stereotypes define how annotations of a given type relate both to the media being annotated and to other hierarchically organized annotations. More information on stereotypes is available in §2.1 of the ELAN manual: <https://www.mpi.nl/corpus/html/elan/ch02.html>.

SPK-Questions	*SPK*-Text	question (SA)	Questions about this annotation
SPK-Lesson-Text	*SPK*-Text	ynlc-lesson-text (SA)	Published Indigenous language lesson text (e.g., "Dànnch'e?")
SPK-Lesson-Translation	*SPK*-Text	ynlc-lesson-translation (SA)	Published English translations in lessons (e.g., "How are you?")
SPK-Lesson-Chapter	*SPK*-Text	ynlc-lesson-chapter (SA)	Title of lesson chapter (e.g., "September lessons")
SPK-Lesson-Section	*SPK*-Text	ynlc-lesson-section (SA)	Title of lesson section (e.g., "Greetings")
SPK-Lesson-Item-Number	*SPK*-Text	ynlc-lesson-item-number (SA)	Item number in lesson (e.g., "1", "2")

TABLE 1. ELAN tier and tier type definitions used to represent individual speakers (SPK) in the CSL project (with corresponding stereotypes given in parentheses; "–" = default tier type, "SA" = Symbolic Association).

Students initially segmented their assigned recordings into utterances according to pause boundaries, with each Indigenous language target word or phrase in the lesson booklets generally appearing as its own annotation. For each time-aligned annotation that represented an utterance in a Yukon Indigenous language, students entered the Indigenous language text exactly as it appeared in the textbook, the corresponding English translation, as well as the chapter, section, and item where this information appeared in the textbook on each of the dependent tiers listed above.[6] In this way, all of the Indigenous language text and English commentary found in the original textbooks was associated in the ELAN transcripts directly with the corresponding segments of the recording, allowing users of the resulting materials to search for any information that was present in the original textbooks and immediately arrive at the associated audio. An excerpt from one of these ELAN documents is shown in Figure 3, showing how the details for the first phrase in the February unit entitled 'Speaking Native Language' were represented in the final time-aligned transcript.

[6] Students were expected to enter information from the textbooks into their ELAN transcripts verbatim, remaining as close to the original as possible. Any discrepancies or mistakes uncovered during this process (e.g., apparent typos in a textbook's English text, mistakes in the original item numbering, inconsistencies in the use of punctuation, etc.) were flagged in annotations on an '*SPK*-Notes' tier for further review.

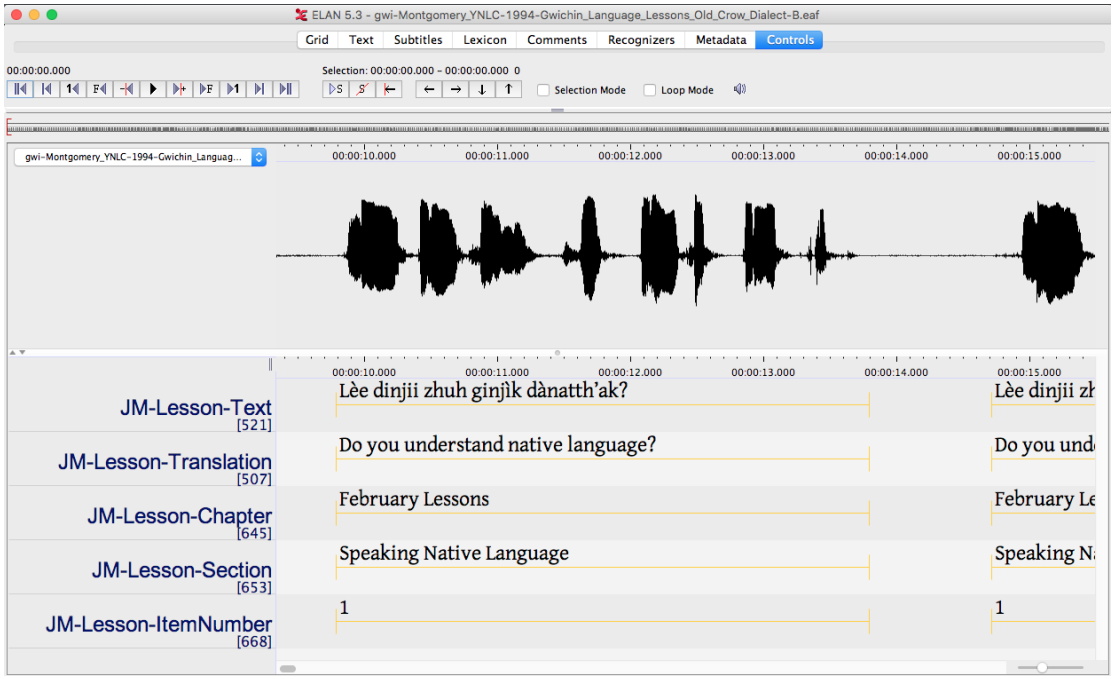

FIGURE 3. ELAN representation of an excerpt from a set of language lessons for the Old Crow dialect of Gwich'in (ISO 639-3: gwi) (Montgomery & YNLC 1994).

Although in-class training was provided in the use of ELAN, students annotated their assigned language materials primarily outside of class, working either individually or in small groups. After the students had completed the segmentation and annotation of their assigned recordings, they were provided with a set of ELAN transcripts to review. During this process, the students reviewed their peers' tier definitions, segmentation practices, and textual annotations, correcting (or, in uncertain cases, marking for the instructor to review) apparent inconsistencies or divergences from group conventions and/or the contents of the textbooks. This stage provided an additional opportunity for students to compare their annotation practices critically against those of their peers while improving the overall quality of the final set of transcripts. This peer review, together with a final written reflection exercise discussed below, concluded the student portion of the CSL project.

5. RESULTS. Students' work in ELAN over the course of one semester produced a 19-hour time-aligned corpus that included audio and bilingual text representing sixteen distinct varieties of seven Yukon Indigenous languages. More specifically, this corpus included 14,642 transcribed bilingual utterances and their accompanying audio segments, comprising 39,262 words in Indigenous languages and 60,478 words of English translations. All of these materials have been added to the permanent digital collections at YNLC for long-term preservation and reuse. In consultations between YNLC, Cox, and the students throughout this project, three key areas of potential application for this multilingual, multimodal database were identified: (1) as a source of information for language education and revitalization programs, (2) as the basis for other language learning tools and (3) as a resource for language promotion. As a multilingual audio-visual database, the results of this project allow students, educators, and policy developers to easily search, retrieve and compare information across Indigenous languages without having to manually search through lesson books or listen to hours of unindexed

audio cassette tapes. For example, if a language teacher were planning to develop a lesson plan pertaining to Valentine's Day and was unsure if audio recordings of words and phrases related to this topic (e.g., "my sweetheart", "I love you", etc.) were available in any existing language lessons, he or she could consult the database and find the corresponding items (or realize that they are not in the language materials) in mere moments.

Scenarios such as these that focus on supporting practical, everyday tasks involved in language education and revitalization programs bring attention to the need for increased accessibility of these resources in multiple forms, which was identified as a second priority for the outcomes of this work. The non-proprietary nature of ELAN transcripts allows their contents and the corresponding media to be transformed into a range of presentation formats, from interactive, online presentations (e.g., Cox & Berez 2009; Dobrin & Ross 2017) to full-fledged, web-based multimodal databases (e.g., the Komi Media Collection; http://videocorpora.ru/en). Similar conversion techniques are envisioned to allow the annotated language lesson recordings produced in this project to be used in similar ways, automatically generating sets of online language lessons that draw on the artwork and visual style of previous online language learning resources developed by YNLC.[7] The use of flexible, 'future friendly' digital formats such as these allow language resource development efforts to concentrate on enriching primary materials with information that enables further applications, providing a range of user-friendly language learning resources that are ultimately derived from the same master transcripts and digitized recordings.

Finally, the third application anticipated for this database is as a tool for language promotion. By widening the scope of their accessibility, we hope that these legacy resources may serve to call further attention to current Indigenous languages and language programs throughout the Yukon, highlighting the work being undertaken by Yukon First Nations to support the maintenance and revitalization of their languages. As well, with Indigenous languages in the Yukon increasingly finding new uses in public domains (e.g., in official signage in some communities, in acknowledgments of traditional territory, and in digital media projects; cf. Moore & Hennessy 2006), resources such as these might also provide an additional source of information for language promotion activities in these spaces.

6. DISCUSSION & CONCLUSION

Partner responses

Following the completion of the CSL project, students were asked to reflect in writing on their experiences in this work and to offer recommendations for future CSL projects. This followed common practice in service learning, where regular reflection on the process and outcomes of the work is typical, and complemented regular, in-class discussions of topics in language documentation that took place in tandem throughout the project, where issues raised in the CSL project often offered a common point of reference to which assigned readings could be related. In general, students' responses were

[7] For one example of these language lessons, see http://ynlc.ca/languages/han/lesson_han_1.html. The information recorded in ELAN transcripts as part of this CSL project, including unit, lesson, and item numbers for each Indigenous language phrase, enable a relatively straightforward conversion of the 'master' recordings and the corresponding ELAN transcripts into online presentation formats such as this.

positive, with many students indicating that they had enjoyed taking part in the project and expressing an interest in being involved in similar projects in the future. The project allowed students to develop a basic understanding of ELAN software through in-class training and project work, which several students mentioned helped to ground theoretically oriented discussions of recommended practices in language documentation into actual practice. Gaining confidence with the usage of ELAN was noted by many students as a useful skill to have, whether in working on other projects in language documentation and conservation in the future or in approaching transcription tasks in other courses and disciplines.

Several students commented on the benefits of having the opportunity to learn more about Indigenous languages and language communities in Canada, both through the presentations on Yukon Indigenous languages given via video teleconference by project partners at the Yukon Native Language Centre and through listening to and reading Indigenous language materials in this project. Some students noted that working with language resources that represented several distinct Indigenous languages had increased their appreciation for the diversity of Indigenous languages spoken in Canada, while others found that the time spent working in detail with the provided materials brought their attention to patterns in the languages themselves, which in turn helped to make the task of working with languages whose sound systems and morphological structures differ quite strikingly from English and French seem more approachable.

Implementing a CSL project as part of a single-semester, graduate-level seminar was also not without its challenges. The most significant barrier that students identified over the course of their involvement in this project was a lack of time. The majority of students participating in the project were at the Master's or doctoral level, and as such had significant academic commitments outside of the demands of this project. The difficulty with allocating adequate time to the project was compounded further by the students' limited working knowledge of and practice with documentary linguistic transcription methods at the outset of the class, which required they become familiar with general transcription and segmentation conventions, project-specific guidelines, as well as with the Indigenous languages themselves and the diacritics associated with each language. In some cases, these difficulties led to inconsistencies across transcriptions, which became evident and needed to be addressed during the peer review phase of the project. As noted in the preceding section, discussions between students and the instructor in this final stage helped both to identify areas of divergence between individual annotators (e.g., how much leading or trailing silence was acceptable within the boundaries of time-aligned annotations, if any) and to come to a degree of consensus on how such discrepancies might be resolved.

From the perspectives of the instructor and the community partners, as well, undertaking a CSL project presented both challenges and benefits. Project partners at the Yukon Native Language Centre commented on this project as offering one way of developing relationships with a wider range of potential partners for future collaborative language projects that advance local priorities for language education and revitalization, and of contributing to further advancing existing capacities for language documentation in the Yukon (e.g., through the on-site training in ELAN for Yukon-based support staff that accompanied this CSL project). Beyond the practical benefits of employing the resulting 19-hour bilingual corpus in creating new resource materials and responding to requests for information on (and in) Yukon Indigenous languages, these partners also noted the value in raising awareness of and appreciation for local Indigenous languages through this kind of work. For the university instructor in this course,

implementing a CSL project in the context of a graduate-level seminar required an additional investment of time beyond regular preparations for teaching, consulting with community partners well in advance of the course to discuss possible avenues for collaboration, preparing transcription guidelines and assembling sets of materials for students to work with, facilitating guest lectures and other opportunities for students and community partners to get to know one another, and in providing training in the relevant documentary linguistic software and annotation techniques for both university and community-based participants. Despite the additional effort that these tasks entailed, the instructor noted that most of these activities involved preparations that took place *before* the project and the graduate seminar began, and that the actual work of the CSL project was not difficult to accommodate in the course of regular teaching during the academic term. Additionally, some of the more time-consuming aspects of the project preparation, including developing assignment descriptions and guidelines, may be reusable in future courses.

From the perspective of the instructor, the pedagogical opportunities that arose from this form of service learning ultimately merited the effort required to implement it. In addition to the practical outcomes of this project (whether considered in terms of relationship building, language materials development, or intensive training in current annotation methods involving realistic language resources), this project provided encouragement for students to view documentary linguistics in its broader social context, requiring careful attention to both linguistic and technical detail *and* to the nature and quality of the relationships and communication between contributors. As noted above, students' reflections on their involvement in the CSL project often entered into general discussions of language documentation throughout the semester, providing a shared point of reference for areas of documentary linguistic practice that were previously outside of the personal experience of many students in the class. While intensive technical training in documentary linguistic methods could no doubt have been delivered without this CSL framing, the additional commitment to this work that students demonstrated as stakeholders with responsibilities that extended beyond their instructor and university was reflected in the quality of their final contributions, which exceeded what the instructor had encountered in previous ELAN training sessions that he had facilitated. All of these factors—greater student engagement with both social and technical aspects of language documentation, more nuanced reflection on documentary linguistic theory and practice, and beneficial, practical outcomes for all project partners—make CSL an attractive option for similar training in documentary linguistics.

Discussion

As noted above, all three groups of participants in this project—staff at the Yukon Native Language Centre, the instructor at Carleton University, and the graduate student participants—found the benefits of CSL in this context to be well worth the required investment of effort. Given this overall positive experience, the project participants would encourage others to consider undertaking similar CSL projects, albeit with several refinements:

1. It may be helpful to provide student contributors with an introduction to the phonetics of the language(s) to be transcribed. This would allow greater confi-

dence in determining the boundaries of each annotation and in entering Indigenous-language text, helping ensure that utterance-initial and utterance-final sounds are not inadvertently omitted.

2. Students may benefit from receiving more opportunities for practice with and feedback pertaining to the use of ELAN prior to commencing a full-scale project. Not only would this reduce inconsistencies across transcripts in students' individual work and in later peer review, but it would also allow students to improve their efficiency in using ELAN and produce transcripts in less time.
3. It may be more practical to divide the workload of future CSL projects on the basis of the number of annotations to be segmented and transcribed (which, in this case, could be estimated using the number of lessons each audio recording featured), rather than by the duration of the audio file. In this project, each student was provided with two or three audio recordings that totaled approximately 90 minutes in length. However, some speakers in the audio recordings spoke more quickly than others, and thus were able to progress through more lessons than others. The number of annotations also varied considerably depending on the number of speakers and dialects featured in each recording. As a result, a 45-minute-long recording for one student may have amounted to 800 annotations, while another student with a different 45-minute-long recording may have annotated more than 1200 items. Overall, dividing the workload by the number of estimated annotations as opposed to the duration of the audio file would more equally balance the time each student spends segmenting and transcribing.
4. Finally, we would encourage others considering similar CSL projects not to overlook the value of the relationships that are fostered between all of the community partners in the course of this work. In this case, while the physical distance that separates the Yukon Native Language Centre and Carleton University made these kinds of connections challenging at times to incorporate, guest lectures given by video teleconference, phone calls between students and community partners, in-person training opportunities, and regular email contact contributed to a common sense of investment in this project, and has led to ongoing discussions of how to continue and expand these collaborations in the future.[8] Viewing opportunities for relationship-building and interpersonal connection as a core component of CSL might, we hope, provide space for positive, collaborative relationships to emerge.

The aim of this discussion is to advance Community Service Learning in the context of language documentation and conservation as one additional means of bringing collaboration between community and university-based partners into closer contact with

[8] From a student perspective, these kinds of connections often provide a valuable complement to the more structurally focused annotation tasks involving the language(s) represented in the CSL project, allowing students to gain a broader understanding of the sociolinguistic environment of the community or communities they are working with and encouraging a greater appreciation for the language(s) and related revitalization projects.

training in documentary linguistics, whether taking place in community language organizations or in universities and colleges. As the work described above suggests, these projects have the potential not only to contribute practically to community priorities for local language programs, resources, and training, but also to foster mutually supportive relationships between project partners that are increasingly seen as a core component in many contexts of language documentation and revitalization (Czaykowska-Higgins 2009). By highlighting the benefits of CSL projects here, it is hoped that more teams will be encouraged to embark upon similar projects in the context of language education, documentation, and revitalization as part of the range of strategies that seek to address the global threat to Indigenous and minority languages.

REFERENCES

Allen, Lorraine and Yukon Native Language Centre. 1994. *Southern Tutchone language lessons: Aishihik dialect*. Whitehorse, YT: Yukon Native Language Centre.

Austin, Peter K. 2016. Language documentation 20 years on. In Luna Filipović & Martin Pütz (eds.), *Endangered languages and languages in danger. Issues of documentation, policy, and language rights*, pp. 147–170. Philadelphia, PA: John Benjamins.

Benedicto, Elena. 2018. When Participatory Action Research (PAR) and (Western) Academic Institutional Policies do not align. In Shannon T. Bischoff & Carmen Jany (eds.), *Insights from practices in Community-Based Research: From theory to practice around the globe* (Trends in Linguistics: Studies and Monographs 319), pp. 38–65. Berlin, Boston: De Gruyter Mouton.

Bischoff, Shannon T. & Carmen Jany (eds.). 2018. *Insights from practices in Community-Based Research: From theory to practice around the globe*. Trends in Linguistics: Studies and Monographs 319. Berlin/Boston: De Gruyter Mouton.

Canadian Alliance for Community Service-Learning. 2018. *Canadian alliance for community service-learning: Home*. Online: http://www.communityservicelearning.ca/en/ (accessed August 18, 2018).

Cox, Christopher & Andrea L. Berez. 2009. Software demonstration: CuPED (Customizable Presentation of ELAN Documents). Paper presented at the 1st International Conference on Language Documentation and Conservation (ICLDC), March 12–14, 2009, Honolulu, HI. Online: http://hdl.handle.net/10125/4969 (accessed September 19, 2018).

Czaykowska-Higgins, Ewa. 2009. Research models, community engagement, and linguistic fieldwork: Reflections on working within Canadian Indigenous communities. *Language Documentation and Conservation* 3(1): 15–50.

Dobrin, Lise M. & Douglas Ross. 2017. The IATH ELAN Text-Sync Tool: A simple system for mobilizing ELAN transcripts on- or off-line. *Language Documentation and Conservation* 11. 94–102. http://hdl.handle.net/10125/24726

Fitzgerald, Colleen M. 2009. Language and community: Using service learning to reconfigure the multicultural classroom. *Language and Education* 23(3): 217–231.

Fitzgerald, Colleen M. 2010. Developing a Service-Learning curriculum for linguistics. *Language and Linguistics Compass* 4(4): 204-218.

Fitzgerald, Colleen M. 2018. Creating sustainable models of language documentation and revitalization. In Shannon T. Bischoff & Carmen Jany (eds.), *Insights from practices in Community-Based Research: From theory to practice around the globe*, pp. 94-111. Berlin, Boston: De Gruyter Mouton.

Fitzgerald, Colleen M. & Mary S. Linn. 2013. Training communities, training graduate students: The 2012 Oklahoma Breath of Life Workshop. *Language Documentation and Conservation* 7. 185–206. http://hdl.handle.net/10125/4596

Florey, Margaret. 2018. Transforming the landscape of language revitalization work in Australia: The Documenting and Revitalising Indigenous Languages training model. In Shannon T. Bischoff & Carmen Jany (eds.), *Insights from practices in Community-Based Research: From theory to practice around the globe*, pp. 314–338. Berlin/Boston: De Gruyter.

Genetti, Carol & Rebecca Siemens. 2013. Training as empowering social action: An ethical response to language endangerment. In Elena Mihas, Bernard Perley, Gabriel Rei-Doval and Kathleen Wheatley (eds.), *Responses to language endangerment. In honor of Mickey Noonan. New directions in language documentation and language revitalization*, 59–77. Amsterdam: John Benjamins.

Moore, Patrick & Kate Hennessy. 2006. New technologies and contested ideologies: The Tagish FirstVoices Project. *The American Indian Quarterly* 30(1): 119–137.

Leonard, Wesley Y. & Erin Haynes. 2010. Making "collaboration" collaborative: An examination of perspectives that frame linguistic field research. *Language Documentation and Conservation* 4. 269–293. http://hdl.handle.net/10125/4482

Montgomery, Jane & Yukon Native Language Centre. 1994. *Gwich'in language lessons: Old Crow dialect.* Whitehorse, YT: Yukon Native Language Centre.

Sloetjes, Han. 2014. ELAN: Multimedia annotation application. In Jacques Durand, Ulrike Gut & Gjert Kristoffersen (eds.), *The Oxford handbook of corpus phonology*, 305–320. Oxford: Oxford University Press.

Wein, Eleanor E. & Milton M. R. Freeman. 1995. Frequency of traditional food use by three Yukon First Nations living in four communities. *Arctic* 48(2).161–171.

Wittenburg, Peter, Hennie Brugman, Albert Russel, Alex Klassmann & Han Sloetjes. 2006. ELAN: A professional framework for multimodality research. In *Proceedings of the 5th International Conference on Language Resources and Evaluation (LREC 2006)*, pp. 1556–1559.

Yamada, Racquel-Maria. 2007. Collaborative linguistic fieldwork: Practical application of the empowerment model. *Language Documentation and Conservation* 1(2): 257–282.

Yukon Native Language Centre. 2018. *History*. Online: http://www.ynlc.ca/history (accessed August 18, 2018).

Christopher Cox
christopher.cox@carleton.ca